TABLE NO | | |

STUDENT ID NO | | | | | | | | | | |

MULTIMEDIA UNIVERSITY

SUBJECT CODE _____

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2018/2019

TSE3351/TSE3571 – SOFTWARE EVOLUTION AND MAINTENANCE

(All sections / Groups)

11 March 2019
9:00 am – 11:00 am
(2 Hours)

Question	Mark
1	
2	
3	
4	
5	
Total	

Examiner 1 Signature: _____

Examiner 2 Signature: _____

Examiner 3 Signature: _____

INSTRUCTIONS TO STUDENTS

1. This question paper consists of 14 printed pages (including cover page).
2. Attempt **ALL** questions. The distribution of the marks for each question is given.
3. Please write all your answers **CLEARLY** in the specific answer box provided for each question. Submit this question paper at the end of the examination.

Question 1 (10 Marks)

A text-based role-playing adventure game that is playable on a web browser. The player takes on the role of a wanderer that finds himself or herself in a dark room somewhere in a forest, and must find ways to survive. As the game progresses, the player must learn to manage a group of other wanderers that happen upon the player in order to gather resources and ensure the community's collective survival. The game owner has decided to place this game in GitHub.

a. What is the advantage of placing the game in GitHub as open source game? Name this kind of classification based on Software Evolution and Maintenance.

(3 Marks)

Continued...

b. If the game owner decides to change his mind to make the game as a Commercial system. What are changes need to be done to his development team?

(5 Marks)

c. Provide the definition for the following terms:

i. Evolution

(1 Mark)

ii. Maintenance

(1 Mark)

Continued...

Question 2 (10 Marks)

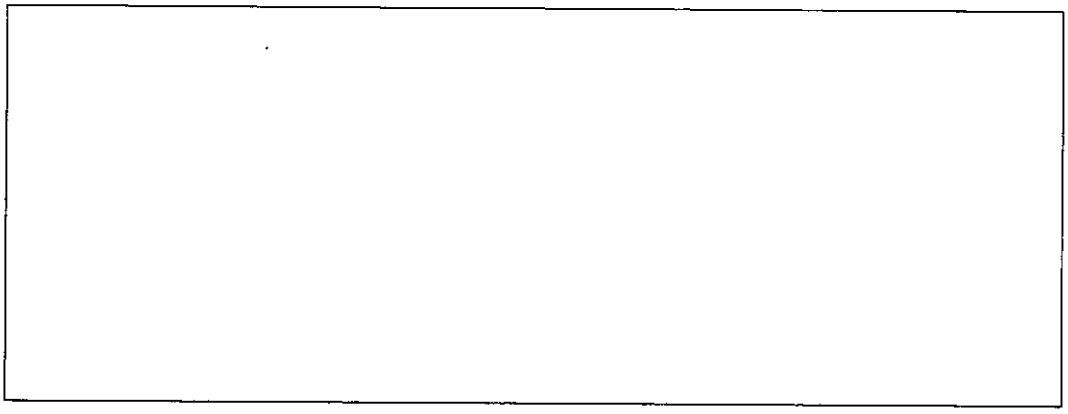
Assume yourself to be appointed to fix a couple of issues a game from called as "Escape from The Maze". Unfortunately, the previous development team did not prepare any documentation for the system. Issues reported are as following

- Examine flux/utils
- Keep player informations
- Enclose the maze by unbreakable walls
- Rewrite "picks" to "pickaxe"
- Add "mine" stage
- Can ignore all key inputs in any time
- Generalize the Dialog Component

a. Based on the scenario above, which approach will you use before start your development.

(1 + 5 Marks)

i. Name the approach.



Continued...

ii. Explain the approach with examples and diagram.

Continued...

b. Based on the list given in above scenario, how will you filter the issues to generate Change Request.

(4 Marks)

Continued...

Question 3 (10 Marks)

ABC Software have been developing a desktop management system for past 7 years. Their product have evolved as in Table 1.

Table 1: Compatible Versions

Version	Compatible Browser
1	Internet Explorer 7
2	Internet Explorer 8
3	Internet Explorer 9
4	Internet Explorer 10
5	Internet Explorer 11

50% of their customers are from the government agency which uses Internet Explorer 9. Meanwhile the rest of them are using the latest technology.

a. If ABC Software would like perform maintenance to version 2 and 3. What type maintenance should be implemented?

(2 Marks)

Continued...

b. What methods can be used ABC software to maintain their legacy system?

(6 Marks)

Continued...

c. What method should not be used by ABC software on their legacy systems? Please explain.

(2 Marks)

Continued...

Question 4 (10 Marks)

Project ABC have just completed its testing phase. It have moved into maintenance phase after the delivery but due to poor requirement collection there was no proper documentation done.

a. Based on the details above what is the right Software Maintenance Life Cycle (SMLC) model to be used for this project? Explain why with a diagram?

(2 + 4 Marks)

Continued...

b. When there is an issue raised by the client, what are the techniques to be used to perform impact analysis? Explain the techniques.

(4 Marks)

Continued...

Question 5 (10 Marks)

Company XYZ have been maintaining a software for past 5 years. They have decided to perform major reengineering to come out with something better. It is expected to change almost the whole system and moved into a new environment.

a. Which reengineering approach should be used by the company?

(2 Marks)

b. Explain why the proposed approach in (a) should be used?

(3 Marks)

Continued...

c. What are objectives of performing system reengineering?

(3 Marks)

Continued...

d. Explain the difference between migration and reengineering. Please elaborate.

(2 Marks)

End of Paper